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REMARKS

Claims 1, 3-8, 10-15, and 17 are all of the claims presently pending in the application. Claims 1, 4, 6, 8 and 15 have been merely editorially amended and have not been substantively amended to more particularly define the invention.

Entry of this Amendment is believed proper since no new issues are being presented to the Examiner which would require further consideration and/or search.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicants specifically state that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 4-6 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 1 and 3-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishikawa et al. (U.S. Patent No. 6,116,055) (hereinafter "Ishikawa"). Claims 8, 10-15 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishikawa in view of Antos et al. (U.S. Patent No. 6,289,698) (hereinafter "Antos").

These rejections are respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

The claimed invention of exemplary claim 1, provides a method for sintering a porous glass-material having a core inside the porous-glass material, wherein the predetermined range of the outer diameter(d) of the porous-glass material includes substantially $0.5xD \leq d \leq 0.9xD$ (e.g., see Application at page 9, line 24 through page 10, line 31). This feature is important for ensuring uniform vitrification in the radial direction of the porous-glass material (see Application at page 9, lines 30-33).

II. THE 35 USC §112, SECOND PARAGRAPH, REJECTION

Claims 4-6 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite.

The Examiner alleges that the subject matter of claims 4-6 is contradictory to

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the subject matter of claim 1. Applicants respectfully submit that claims 1, 4 and 6 have been amended in accordance with the Examiner's rejection.

Specifically, claims 1, 4 and 6 have been amended above to replace the term "determined" with the term "predetermined".

In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw this rejection.

III. THE PRIOR ART REFERENCES

A. The Ishikawa Reference

The Examiner alleges that the claimed invention of claims 1 and 3-7 would have been obvious in view of Ishikawa. Applicants submit, however, that there are elements of the claimed invention which are neither taught nor suggested by, nor would have been obvious in view of, Ishikawa.

That is, Ishikawa does not teach or suggest a method for sintering a porous glass-material having a core inside the porous-glass material, wherein "*said predetermined range of said outer diameter (d) of said porous-glass material comprises substantially $0.5xD \leq d \leq 0.9xD$* " as recited in claim 1, and similarly recited in claims 8 and 15.

Indeed, the Examiner does not even allege that Ishikawa teaches or suggests these features.

That is, the Examiner merely alleges that "it is noted that Applicant implicitly admits that Ishikawa meets the claimed range. On page 9, lines 15-22 of the arguments of 5 April 2005, Applicant points out if one practices the method with a value less than the 0.5-0.9 range, then no useful product will result. Ishikawa is presumed to be enabled for its intended purpose. Thus Ishikawa has to have a range of at least 0.5" (see Office Action dated April 27, 2005 at page 4, lines 8-12). Applicants respectfully disagree.

That is, Applicants submit that while Ishikawa may be presumed to be enabled for its intended purpose it is merely enabled for solving the specific problems recognized in Ishikawa (i.e., the intended purpose of Ishikawa, not the intended purpose of the claimed invention). Specifically, Ishikawa is merely enabled for drawing an optical fiber

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having a low transmission loss (see Ishikawa at column 2, lines 3-7).

Along these lines, as pointed out in M.P.E.P. §2141.02: "[A] patentable invention may lie in the discovery of a source of a problem even though the remedy may be obvious once the source of the problem is identified. This is part of the 'subject matter as a whole' which should always be considered in determining the obviousness of the invention under 35 U.S.C. § 103." Applicants have discovered a specific source of a specific problem and have further discovered a specific parameter that effects the source of the problem. Ishikawa does not recognize the problem, the source of the problem, nor the parameter.

Specifically, the specific range recited in claim 1 allows the claimed invention to provide more effective sintering of a porous glass material, and more particularly allows the claimed invention to provide a glass base material having lower eccentricity in a radial direction.

The claimed invention recognizes that if the outer diameter of the porous-glass material is smaller than $0.5 \times D$, then the porous-glass material is sintered inside of the furnace where the temperature gradient in the radial direction of the furnace is large. Thus, the porous-glass material may be vitrified non-uniformly in the radial direction, and therefore the eccentricity of the core inside of the glass base material increases (see Application at page 9, lines 24-33). An increase in the eccentricity of a core causes a serious defect in the glass base material product so that the manufactured glass base material cannot be used as a product (see Application at page 10, lines 6-8).

Additionally, the claimed invention recognizes that if the outer diameter of the porous-glass material is larger than $0.9 \times D$, the porous-glass material may contact with the sidewall of the furnace and may be damaged during the sintering process (see Application at page 10, lines 10-14).

Nowhere does Ishikawa teach or suggest that the outer diameter of the porous-glass material may have any effect on the eccentricity of the core inside of the glass base material. Certainly, Ishikawa does not teach or suggest that the outer diameter of the porous-glass material may be chosen to lower the eccentricity of a glass base material in a radial direction. Ishikawa does not even recognize the problem addressed by the

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claimed invention. Therefore, it is clearly unreasonable to suggest that the specific range recited in exemplary claim 1 would have been obvious in view of Ishikawa.

Applicants point out that MPEP 2144.05 states that “[t]he law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims”. The claimed range recited in claim 1, and similarly recited in claims 8 and 15, is important for achieving the desired results of the claimed invention. A specific range or other variable in a claim may provide patentable weight to a claim if the applicant can show that the particular range is important (see M.P.E.P. § 2144.05). In order to teach this claimed ratio, the specific limitation must be disclosed in the reference with “sufficient specificity to constitute an anticipation under the statute” (see M.P.E.P. § 2131.03). As stated above, Ishikawa does not teach or suggest the specific range recited in claim 1 and similarly recited in claims 8 and 15.

Thus, the specific range recited in exemplary claim 1 (and similarly recited in claims 8 and 15) clearly shows a technical effect and is not arbitrarily selected to solve the problems presented in the Application.

Therefore, Applicants submit that the claimed invention recites features that are not obvious in view of Ishikawa. Therefore, the Examiner is respectfully requested to reconsider and withdraw this rejection.

B. The Antos Reference

The Examiner alleges that Antos would have been combined with Ishikawa to form the claimed invention of claims 8, 10-15 and 17. Applicants submit, however, that even if combined, the alleged combination of references would not teach or suggest each and every feature of the claimed invention.

That is, neither Ishikawa nor Antos, nor any combination thereof, teaches or suggests that “*said predetermined range of said outer diameter (d) of said porous-glass material comprises substantially $0.5xD \leq d \leq 0.9xD$* ” as recited in claim 1 and similarly recited in claims 8 and 15.

Indeed, the Examiner does not even allege that Antos teaches or suggests this feature. The Examiner merely relies upon Antos as teaching that it is known to stretch

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preforms to reduce bubbles.

Thus, Antos clearly fails to make up for the deficiencies of Ishikawa.

Furthermore, regarding the Examiner's Response to Arguments (see Office Action dated April 27, 2005 at page 7) Applicants point out that the Examiner has erroneously applied the decision of *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). That is, the facts presented in *In re Keller* clearly do not apply to Applicants' arguments.

In *In re Keller* the appellant provided an affidavit that was only concerned with whether one of the applied references suggested the use of a digital timing in a cardiac pacer. That is, the appellant only argued against one of the references, but did not provide any evidence that the other two references used in the 103(a) rejection did not teach or suggest digital timing in a cardiac pacer. The court stated that "the test is not whether a suggestion to use digital timing in a cardiac pacer is round in Walsh (which was the test applied by Dr. Cywinski), but rather what Keller in view of Walsh and what Berkovits in view of Walsh would have suggested to one of ordinary skill in the art". Therefore, in *In re Keller* the appellant only attacked one of the applied references.

However, in stark contrast to the facts of *In re Keller*, in the Amendment filed on March 10, 2005, Applicants clearly provided arguments against each of the references applied in the Examiner's 103(a) rejection. Applicants submit that Applicants' arguments provided in the Amendment filed on April 5, 2005 are completely different from the facts provided in *In re Keller*.

Therefore, if the Examiner wishes to continue to apply *In re Keller* to the present Application, Applicants respectfully request the Examiner to read *In re Keller* in its entirety and compare the facts of *In re Keller* to Applicants' arguments.

Therefore, Applicants respectfully submit that these references would not have been combined as alleged by the Examiner and that, even if combined, the alleged combination of features does not teach or suggest each and every feature of the claimed invention. Therefore, the Examiner is respectfully requested to reconsider and withdraw this rejection.

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IV. FORMAL MATTERS AND CONCLUSION

In response to the Examiner's objections to the claims, Applicants have amended dependent claims 4 and 6 to replace the term "determined" with the term "predetermined". The Examiner is respectfully requested to withdraw this objection.

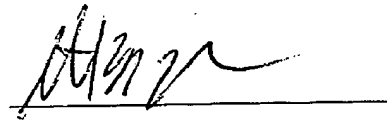
In view of the foregoing, Applicants submit that claims 1, 3-8, 10-15 and 17, all of the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date: July 27, 2005



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I hereby certify that I am filing this paper via facsimile, to Group Art Unit 1731,
at (571) 273-8300, on July 27, 2005.

Respectfully submitted,

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